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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/491,461

01/26/2000

Paul Dagum

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EXAMINER

VAN DOREN, BETH

ART UNIT

PAPER NUMBER

3623

MAIL DATE

DELIVERY MODE

04/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/491,461	Applicant(s) DAGUM ET AL.	
	Examiner BETH VAN DOREN	Art Unit 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/29/2007 has been entered.

Claims 1, 11-12, 15, and 21 have been amended. Claim 22-30 and 32 has been canceled. Claims 1-21 and 32 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 12-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For a claimed invention to be statutory it must fall into one of the four statutory categories and, if the claim contains a judicial exception (i.e. a law of nature, a natural phenomena, or an abstract idea per se), the claim must contain a practical application of the

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judicial exception. The practical application of the judicial exception can be accomplished through physical transformation (“transforms” an article or physical object to a different state or thing) or through production of a useful, concrete, and tangible result. See MPEP 2106.

In the current case, claim 12 contains the judicial exception of an abstract idea as it contains an algorithms and using multivariate non-linear expected value functions. However, claim 12 does not contain a practical application for this judicial exception. First, there is no transformation of an article or physical object to a different state or thing in claim 12. Further, claim 12 does not produce a useful, concrete, and tangible result. The result of claim 12 is “the optimization of the non-linear expected value function”. This result is not considered useful or tangible. In order to be useful, the result must be specific, substantial, and credible. To have specific and substantial usefulness, the claimed invention should be useful for a particular practical purpose (excluding “throw-away,” “insubstantial,” or “nonspecific” utilities) MPEP 2107. In the current case, the claimed result is solving and presenting an “optimization of the non-linear expected value function”, but the claim does not specifically set forth what the problem and its variables represent and set forth to solve. Thus, what the resulting optimization represents is not apparent from the claim, and therefore it is respectfully submitted that the claim has a nonspecific utility, and thus lacks usefulness.

Further, it is respectfully submitted that claim 12 does produce a tangible result. The tangible requirement requires that the claim must set forth a practical application of that judicial exception to produce a real-world result. However, claim 12 results in solving and presenting an “optimization of the non-linear expected value function”, without setting forth what this optimization represents (i.e. is it a value having real world significance).

Claims 15 and 21 recite substantially similar limitations and therefore have the same deficiencies set forth above. Claims 13-14 and 16-20 are dependent from claims 12 and 15 and therefore contain the same deficiencies.

Further, with regards to claims 12-20, the courts have also held that a claim may not preempt ideas, laws of nature or natural phenomena. Accordingly, one may not patent every “substantial practical application” of an idea, law of nature or natural phenomena because such a patent would “in practical effect be a patent on the [idea, law of nature or natural phenomena] itself.” *Gottschalk v. Benson*, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972). In the current case, claims 12 and 15 recite a computer-implemented method that uses a mathematical algorithm and multivariate a non-linear expected value function to solve for an optimization of the expected value function. Math algorithms are considered abstract ideas. Further, claims 12 and 15 do not recite a specific practical application for claims. Rather, claims 12 and 15 cover any application in which multivariate a non-linear expected value functions and solving to optimize such a function would be used. Therefore, claims 12 and 15 preempt every substantial practical application of the abstract idea because it is not directed to specific use or application. Thus, the claim is directed to the abstraction itself, where such a judicial exception is not patentable.

Claims 13-14 and 16-20 are dependent from claims 12 and 15 and therefore contain the same deficiencies.

Allowable Subject Matter

5. Claims 1-11 and 31 are allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to BETH VAN DOREN whose telephone number is (571)272-6737. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. V.D./

Primary Examiner, Art Unit 3623

January 22, 2008

/Beth Van Doren/

Primary Examiner, Art Unit 3623